

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 1 to 16.

The above amendment amends the lower limit "0.005 mass %" of "P" in claims 1 to 8 of the present application to "0.008 mass %" of "P", support for which is "Sample No. 1-1" as set forth in TABLE 1 at page 8 of the present specification.

The significance of this amendment will be discussed in further detail below.

Claims 1, 2, 4 and 6 have been rejected under 35 U.S.C. 102(b) as anticipated by Croce (U.S. 6,841,012).

Further, claims 3, 5, 7 and 8 have been rejected under 35 U.S.C. 103(a) as unpatentable over Croce (U.S. 6,841,012).

Also claims 9 to 16 have been rejected under 35 U.S.C. 103(a) as unpatentable over Croce as applied to claims 1 to 8 above, and further in view of ASM Handbooks Online, Vol. 5, Surface Engineering, page 1.

These rejections are respectfully traversed.

Croce discloses anti-tarnish silver alloy containing at least about 85% silver, with the balance including zinc, copper, indium and tin.

Croce, however, neither discloses nor suggests an Ag-alloy which contains "P", except for Comparative Example 6 which shows the result of analysis of formulation of a conventional Ag-alloy used in jewelry and sold under the tradename ULTRAFINE SILVER™ (see column 9, lines 2 to 52).

It is considered that the above-mentioned Example 6 actually teaches those skilled in the art away from an idea of incorporating "P" into the Ag-alloy.

In its formulation, the Ag-alloy of Croce's Comparative Example 6 further comprises "P" in addition to the components of the Ag-alloy of Examples 1 and 2. According to TABLE 4 in column 10 which shows the result of a test of tarnish resistance over time, the Ag-alloy of Croce's Comparative Example 6 which contains "P", is severely inferior in tarnish resistance to the Ag-alloys of Examples 1 and 2 which do not contain "P".

This data of TABLE 4 means that the addition of "P" to Ag-alloy has adverse effects on the tarnish resistance of Ag-alloy.

Hence, the data of TABLE 4 of the Croce reference would have provided no incentive to the art-skilled persons to add "P" to Ag-alloy, and rather would have taught away from an idea of adding "P".

Furthermore, the total weight percent of elements which are recited in the table of Comparative Example 6 amounts to "100.3492%", which exceeds 100%. The accuracy of analysis of formulation which is given by this table is thus questionable.

The above amendment reciting 0.008 to 1.0 mass % of P clearly distinguishes the Ag-alloys of the present invention from the Ag-alloy of the Croce reference which contains 0.0053 wt (mass) % of P (ULTRAFINE SILVER™). This single example of Croce is set forth in Comparative Example 6 and, as discussed above, appears to suggest that the presence of P is undesirable.

The present inventors on the other hand, have engaged in extensive research towards achieving a film-forming sputtering target material with improved heat resistance while retaining high reflectance and have discovered that an Ag base alloy exhibiting drastically improved heat resistance while retaining the high reflectance characteristic of Ag can be obtained when a specific minor amount of phosphorus (P) is added and alloyed together and further, that an Ag base alloy exhibiting improved corrosion resistance as well as heat resistance can be obtained when a minor amount of metallic element(s) such as In, Sn, Zn, Au, Pt, Pd and the like is (are) added to Ag, in addition to the specific minor amount of P, and are alloyed together. Still further, they have discovered that heat resistance of the Ag base alloy can be further improved when each a minor amount of such metallic element(s) as Cu, Ni, Fe, Bi and the like is (are) added to Ag, in addition to the specific minor amount of P, and alloyed together.

Such features and advantages of the present invention as mentioned above are unforeseeable from the Croce reference which only teaches the adverse effects of the addition of "P" to an Ag-alloy.

There is nothing in the ASM Handbooks reference which overcomes the above deficiencies of the Croce reference.

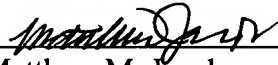
For the foregoing reasons, the rejections on prior art are untenable and should be withdrawn.

No further issues remaining, allowance this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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